



ENTERED

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/836,911A

DATE: 03/27/2002 TIME: 14:35:31

Input Set : A:\402iseq.002

Output Set: N:\CRF3\03272002\1836911A.raw

## SEQUENCE LISTING

SEQUENCE LISTING					
	4	• •	RAL INFORMATION:		
	6	(i)	APPLICANT: Hadlaczky, Gyula		
	7		Szalay, Aladar		
	9	(ii)	TITLE OF INVENTION: ARTIFICIAL CHROMOSOMES, USES THEREOF		
	10		AND METHODS FOR PREPARING ARTIFICIAL CHROMOSOMES		
	12	(iii)	NUMBER OF SEQUENCES: 34		
	14	(iv)	CORRESPONDENCE ADDRESS:		
	15		(A) ADDRESSEE: Heller Ehrman White & McAuliffe		
	16		(B) STREET: 4350 La Jolla Village Drive, 6th Floor		
	17		(C) CITY: San Diego		
	18		(D) STATE: CA		
	19		(E) COUNTRY: USA		
	20		(F) ZIP: 92122		
	22	(V)	COMPUTER READABLE FORM:		
	23		(A) MEDIUM TYPE: Diskette		
	24		(B) COMPUTER: IBM Compatible		
	25		(C) OPERATING SYSTEM: DOS		
	26		(D) SOFTWARE: FastSEQ Version 1.5		
	28	(vi)	CURRENT APPLICATION DATA:		
C>	29		(A) APPLICATION NUMBER: US/09/836,911A		
C>	30		(B) FILING DATE: 17-Apr-2002		
	31		(C) CLASSIFICATION:		
	33	(vii)	PRIOR APPLICATION DATA:		
	34		(A) APPLICATION NUMBER: 08/835,682		
	35		(B) FILING DATE: 10-APR-1997		
	36		(A) APPLICATION NUMBER: 08/695,191		
	37		(B) FILING DATE: 07-AUG-1996		
	38		(A) APPLICATION NUMBER: 08/682,080		
	39		(B) FILING DATE: 15-JUL-1996		
	40		(A) APPLICATION NUMBER: 08/629,822		
	41		(B) FILING DATE: 10-APR-1996		
	43	(viii)	ATTORNEY/AGENT INFORMATION:		
	44		(A) NAME: Seidman, Stephanie L		
	45		(B) REGISTRATION NUMBER: 33,779		
	46		(C) REFERENCE/DOCKET NUMBER: 24601-4021		
	49	(ix)	TELECOMMUNICATION INFORMATION:		
	50		(A) TELEPHONE: 858-450-8403		
	51		(B) TELEFAX: 858-587-5360		
	52		(C) TELEX:		
	54	(2) INFOR	RMATION FOR SEQ ID NO: 1:		
	56	(i)	SEQUENCE CHARACTERISTICS:		

(A) LENGTH: 1293 base pairs

57

DATE: 03/27/2002

TIME: 14:35:31

Input Set : A:\402iseq.002 Output Set: N:\CRF3\03272002\I836911A.raw 58 (B) TYPE: nucleic acid 59 (C) STRANDEDNESS: single 60 (D) TOPOLOGY: linear (ii) MOLECULE TYPE: Genomic DNA 62 (iii) HYPOTHETICAL: NO 63 (iv) ANTI-SENSE: NO 64 65 (V) FRAGMENT TYPE: 66 (vi) ORIGINAL SOURCE: (ix) FEATURE: 67 69 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1: 71 GAATTCATCA TTTTTCANGT CCTCAAGTGG ATGTTTCTCA TTTNCCATGA TTTTAAGTTT 60 TCTCGCCATA TTCCTGGTCC TACAGTGTGC ATTTCTCCAT TTTNCACGTT TTNCAGTGAT TTCGTCATTT TCAAGTCCTC AAGTGGATGT TTCTCATTTN CCATGAATTT CAGTTTTCTN 180 GCCATATTCC ACGTCCTACA GNGGACATTT CTAAATTTNC CACCTTTTTC AGTTTTCCTC 240 GCCATATTC ACGTCCTAAA ATGTGTATTT CTCGTTTNCC GTGATTTTCA GTTTTCTCGC 300 CAGATTCCAG GTCCTATAAT GTGCATTTCT CATTTNNCAC GTTTTTCAGT GATTTCGTCA 360 77 TTTTTTCAAG TCGGCAAGTG GATGTTTCTC ATTTNCCATG ATTTNCAGTT TTCTTGNAAT 420 ATTCCATGTC CTACAATGAT CATTTTTAAT TTTCCACCTT TTCATTTTTC CACGCCATAT 78 480 TTCATGTCCT AAAGTGTATA TTTCTCCTTT TCCGCGATTT TCAGTTTTCT CGCCATATTC 80 CAGGTCCTAC AGTGTGCATT CCTCATTTTT CACCTTTTTC ACTGATTTCG TCATTTTCA 600 AGTCGTCAAC TGGATCTTTC TAATTTTCCA TGATTTTCAG TTATCTTGTC ATATTCCATG 81 660 TCCTACAGTG GACATTTCTA AATTTTCCAA CTTTTTCAAT TTTTCTCGAC ATATTTGACG 720 TGCTAAAGTG TGTATTTCTT ATTTTCCGTG ATTTTCAGTT TTCTCGCCAT ATTCCAGGTC 780 CTAATAGTGT GCATTTCTCA TTTTTCACGT TTTTCAGTGA TTTCGTCATT TTTTCCAGTT 840 GTCAAGGGGA TGTTTCTCAT TTTCCATGAG TGTCAGTTTT CTTGCTATAT TCCATGTCCT 900 ACAGTGACAT TTCTAAATAT TATACCTTTT TCAGTTTTTC TCACCATATT TCACGTCCTA AAGTATATAT TTCTCATTTT CCCTGATTTT CAGTTTCCTT GCCATATTCC AGGTCCTACA 1020 GTGTGCATTT CTCATTTTTC ACGTTTTTCA GTAATTTCTT CATTTTTTAA GCCCTCAAAT 1080 GGATGTTTCT CATTTTCCAT GATTTTCAGT TTTCTTGCCA TATACCATGT CCTACAGTGG 89 1140 ACATTTCTAA ATTATCCACC TTTTTCAGTT TTTCATCGGC ACATTTCACG TCCTAAAGTG 1200 1260 TGTATTTCTA ATTTTCAGTG ATTTTCAGTT TTCTCGCCAT ATTCCAGGAC CTACAGTGTG CATTTCTCAT TTTTCACGTT TTTCAGTGAA TTC 1293 (2) INFORMATION FOR SEQ ID NO: 2: 96 (i) SEQUENCE CHARACTERISTICS: 97 (A) LENGTH: 1044 base pairs 98 (B) TYPE: nucleic acid 99 (C) STRANDEDNESS: single (D) TOPOLOGY: linear 100 102 (ii) MOLECULE TYPE: Genomic DNA 103 (iii) HYPOTHETICAL: NO 104 (iv) ANTI-SENSE: NO W--> 105 (V) FRAGMENT TYPE: 106 (vi) ORIGINAL SOURCE: 107 (ix) FEATURE: 109 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2: 111 AGGCCTATGG TGAAAAAGGA AATATCTTCC CCTGAAAACT AGACAGAAGG ATTCTCAGAA 60 112 TCTTATTTGT GATGTGCGCC CCTCAACTAA CAGTGTTGAA GCTTTCTTTT GATAGAGCAG 120 113 TTTTGAAACA CTCTTTTTGT AAAATCTGCA AGAGGATATT TGGATAGCTT TGAGGATTTC 180 CGTTGGAAAC GGGATTGTCT TCATATAAAC CCTAGACAGA AGCATTCTCA GAAGCTTCAT 240

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/836,911A

RAW SEQUENCE LISTING DATE: 03/27/2002 PATENT APPLICATION: US/09/836,911A TIME: 14:35:31

Input Set : A:\402iseq.002

Output Set: N:\CRF3\03272002\1836911A.raw

	115	TGGGATGTTT CAGTTGAAGT CACAGTGTTG AACAGTCCCC TTTCATAGAG CAGGTTTGAA	300			
	116	ACACTCTTTT TTGTAGTATC TGGAAGTGGA CATTTGGAGC GATCTCAGGA CTGCGGTGAA	360			
	117	AAAGGAAATA TCTTCCAATA AAAGCTAGAT AGAGGCAATG TCAGAAACCT TTTTCATGAT	420			
	118	GTATCTACTC AGCTAACAGA GTTGAACCTT CCTTTGAGAG AGCAGTTTTG AAACACTCTT	480			
	119	TTTGTGGAAT CTGCAAGTGG ATATTTGTCT AGCTTTGAGG ATTTCGTTGG GAAACGGGAT	540			
	120	TACATATAAA AAGCAGACAG CAGCATTCCC AGAAACTTCT TTGTGATGTT TGCATTCAAG	600			
	121	TCACAGAGTT GAACATTCCC TTTCATAGAG CAGGTTTGAA ACACACTTTT TGATGTATCT	660			
	122	GGATGTGGAC ATTTGCAGCG CTTTCAGGCC TAAGGTGAAA AGGAAATATC TTCCCCTGAA	720			
	123	AACTAGACAG AAGCATTCTC AGAAACTTAT TTGTGATGTG CGCCCTCAAC TAACAGTGTT	780			
	124	GAAGCTTTCT TTTGATAGAG GCAGTTTTGA AACACTCTTT TGTGGAATCT GCAAGTGGAT	840			
	125	ATTTGTCTAG CTTTGAGGAT TTCTTTGGAA ACGGGATTAC ATATAAAAAG CAGACAGCAG	900			
	126	CATTCCCAGA ATCTTGTTTG TGATGTTTGC ATTCAAGTCA CAGAGTTGAA CATTCCCTTT	960			
	127	CAGAGAGCAG GTTTGAACAC TCTTTTTATA GTATCTGGAT GTGGACATTT GGAGCGCTTT	1020			
	128	CAGGGGGGAT CCTCTAGAAT TCCT	1044			
	132	2) INFORMATION FOR SEQ ID NO: 3:				
	134	(i) SEQUENCE CHARACTERISTICS:				
	135	(A) LENGTH: 2492 base pairs				
	136	(B) TYPE: nucleic acid				
	137	(C) STRANDEDNESS: single				
	138	(D) TOPOLOGY: linear				
	140	(ii) MOLECULE TYPE: Genomic DNA				
	141	(iii) HYPOTHETICAL: NO				
	142	(iv) ANTI-SENSE: NO				
w>	143	(V) FRAGMENT TYPE:				
	144	(vi) ORIGINAL SOURCE:				
	145	(ix) FEATURE:				
	147	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:				
	149	CTGCAGCTGG GGGTCTCCAA TCAGGCAGGG GCCCCTTACT ACTCAGATGG GGTGGCCGAG	60			
	150	TAGGGGAAGG GGGTGCAGGC TGCATGAGTG GACACAGCTG TAGGACTACC TGGGGGCTGT	120			
	151	GGATCTATGG GGGTGGGGAG AAGCCCAGTG ACAGTGCCTA GAAGAGACAA GGTGGCCTGA	180			
	152	GAGGGTCTGA GGAACATAGA GCTGGCCATG TTGGGGCCAG GTCTCAAGCA GGAAGTGAGG	240			
	153	AATGGGACAG GCTTGAGGAT ACTCTACTCA GTAGCCAGGA TAGCAAGGAG GGCTTGGGGT	300			
	154	TGCTATCCTG GGGTTCAACC CCCCAGGTTG AAGGCCCTGG GGGAGATGGT CCCAGGACAT	360			
	155	ATTACAATGG ACACAGGAGG TTGGGACACC TGGAGTCACC AAACAAAACC ATGCCAAGAG	420			
	156	AGACCATGAG TAGGGGTGTC CAGTCCAGCC CTCTGACTGA GCTGCATTGT TCAAATCCAA	480			
	157	AGGGCCCCTG CTGCCACCTA GTGGCTGATG GCATCCACAT GACCCTGGGC CACACGCGTT	540			
	158	TAGGGTCTCT GTGAAGACCA AGATCCTTGT TACATTGAAC GACTCCTAAA TGAGCAGAGA	600			
	159	TTTCCACCTA TTCGAAACAA TCACATAAAA TCCATCCTGG AAAAAGCCTG GGGGATGGCA	660			
	160	CTAAGGCTAG GGATAGGGTG GGATGAAGAT TATAGTTACA GTAAGGGGTT TAGGGTTAGG	720			
	161	GATCAACGTT GGTTAGGAGT TAGGGATACA GTAGGGTACC GGTAGGGTTA GGGGTTAGGG	780			
	161 162	GATCAACGTT GGTTAGGAGT TAGGGATACA GTAGGGTTACC GGTAGGGTTA GGGGTTAGGG TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA	780 840			
			840			
	162	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA				
	162 163	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA GGGTTAGGTT TTGGGGTGGC GTATTTTGGT CTTATACGCT GTGTTCCACT GGCAATGAAA	840 900			
	162 163 164	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA GGGTTAGGTT TTGGGGTGGC GTATTTTGGT CTTATACGCT GTGTTCCACT GGCAATGAAA AGAGTTCTTG TTTTTCCTTC AGCAATTTGT CATTTTTAAA AGAGTTTAGC AATTCTAACA	840 900 960			
	162 163 164 165	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA GGGTTAGGTT TTGGGTTGC GTATTTTGGT CTTATACGCT GTGTTCCACT GGCAATGAAA AGAGTTCTTG TTTTCCTTC AGCAATTTGT CATTTTAAA AGAGTTTAGC AATTCTAACA GATATAGACC AGCTGTGCTA TCTCATTGTG GTTTTCAATT GTAACCACAT TGTGGTTTCA ATGTGTTTAC TTGCCATCTG TAGATCTTCT TTGCGTGAGG TGTCTGTTCA GATGTGTGTG	840 900 960 1020			
	162 163 164 165 166	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA GGGTTAGGTT TTGGGGTGC GTATTTTGGT CTTATACGCT GTGTTCCACT GGCAATGAAA AGAGTTCTTG TTTTCCTTC AGCAATTTGT CATTTTAAA AGAGTTTAGC AATTCTAACA GATATAGACC AGCTGTGCTA TCTCATTGTG GTTTTCAATT GTAACCACAT TGTGGTTTCA ATGTGTTTAC TTGCCATCTG TAGATCTTCT TTGCGTGAGG TGTCTGTTCA GATGTGTGTG CATTTCTTGN NTTTNGGCTG TTTAACTTAT TGTTTAGTTT TAATAATTTT TTATATATTT	840 900 960 1020 1080 1140			
	162 163 164 165 166 167	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA GGGTTAGGTT TTGGGTTGC GTATTTTGGT CTTATACGCT GTGTTCCACT GGCAATGAAA AGAGTTCTTG TTTTCCTTC AGCAATTTGT CATTTTAAA AGAGTTTAGC AATTCTAACA GATATAGACC AGCTGTGCTA TCTCATTGTG GTTTTCAATT GTAACCACAT TGTGGTTTCA ATGTGTTTAC TTGCCATCTG TAGATCTTCT TTGCGTGAGG TGTCTGTTCA GATGTGTGTG	840 900 960 1020 1080 1140 1200			
	162 163 164 165 166 167 168	TTAGGGGTTA GGGTTAGGGT TAGGGTTAGG GTTAGGGTTA GGGGTTAGGG GTTAGGGTTA GGGTTAGGTT TTGGGGTGC GTATTTTGGT CTTATACGCT GTGTTCCACT GGCAATGAAA AGAGTTCTTG TTTTTCCTTC AGCAATTTGT CATTTTAAA AGAGTTTAGC AATTCTAACA GATATAGACC AGCTGTGCTA TCTCATTGTG GTTTTCAATT GTAACCACAT TGTGGTTTCA ATGTGTTTAC TTGCCATCTG TAGATCTTCT TTGCGTGAGG TGTCTGTTCA GATGTGTGTG CATTTCTTGN NTTTNGGCTG TTTAACTTAT TGTTTAGTTT TAATAATTTT TTATATATTT GAAGACAAAT CTTTCTCAGA TGTGTATTTG CAAATATTC TTCAATATGA GGCTTGCTTT	840 900 960 1020 1080 1140			

## RAW SEQUENCE LISTING DATE: 03/27/2002 PATENT APPLICATION: US/09/836,911A TIME: 14:35:31

Input Set : A:\402iseq.002

Output Set: N:\CRF3\03272002\1836911A.raw

```
171 ATAGCTTTTC TTCTATTGTT TCTTCTAGAA ATTTGTATAG TTTTGCATTT TTAGTGTAAG
                                                                             1380
     172 GATGATTTTG AGTGATTATT TGTGTAAGTT GTAAAGTTTT CGTCTATATC CATATCATTT
                                                                             1440
     173 CTTATGGTTT CCAATTAATC GTTCCCTCAC TATTTTTGGG AAAGACACAG GATAGTGGGC
                                                                             1500
         TTTGTTAGAG TAGATAGGTA GCTAGACATG AACAGGAGGG GGCCTCCTGG AAAAGGGAAA
     175 GTCTGGGAAG GCTCACCTGG AGGACCACCA AAAATTCACA TATTAGTAGC ATCTCTAGTG
                                                                             1620
     176 CTGGAGTGGA TGGGCACTTG TCAATTGTGG GTAGGAGGGA AAAGAGGTCC TATGCAGAAA
                                                                             1680
     177 GAAACTCCCT AGAACTCCTC TGAAGATGCC CCAATCATTC ACTCTGCAAT AAAAATGTCA
                                                                             1740
     178 GAATATTGCT AGCTACATGC TGATAAGGNN AAAGGGGACA TTCTTAAGTG AAACCTGGCA
                                                                             1800
     179 CCATAAGTAC AGATTAGGGC AGAGAAGGAC ATTCAAAAGA GGCAGGCGCA GTAGGTACAA
                                                                             1860
     180 ACGTGATCGC TGTCAGTGTG CCTGGGATGG CGGGAAGGAG GCTGGTGCCA GAGTGGATTC
                                                                             1920
     181 GTATTGATCA CCACACATAT ACCTCAACCA ACAGTGAGGA GGTCCCACAA GCCTAAGTGG
         GGCAAGTTGG GGAGCTAAGG CAGTAGCAGG AAAACCAGAC AAAGAAAACA GGTGGAGACT
                                                                             2040
         183
                                                                             2100
         GCTGTTTAAT GCATCGCTCA GTCCCACTCC TCCCTATTTT TCTACAATAA ACTCTTTACA
     184
                                                                             2160
         CTGTGTTTCT TTTCAATGAA GTTATCTGCC ATCTTTGTAT TGCCTCTTGG TGAAAATGTT
                                                                             2220
     186
         TCTTCCAAGT TAAACAAGAA CTGGGACATC AGCTCTCCCC AGTAATAGCT CCGTTTCAGT
                                                                             2280
     187
         TTGAATTTAC AGAACTGATG GGCTTAATAA CTGGCGCTCT GACTTTAGTG GTGCAGGAGG
                                                                             2340
         CCGTCACACC GGGACCAAGA GTGCCCTGCC TAGTCCCCAT CTGCCCGCAG GTGGCGGCTG
    188
                                                                             2400
         CCTCGACACT GACAGCAATA GGGTCCGGCA GTGTCCCCAG CTGCCAGCAG GGGGCGTACG
                                                                             2460
         ACGACTACAC TGTGAGCAAG AGGGCCCTGC AG
                                                                             2492
    192 (2) INFORMATION FOR SEQ ID NO: 4:
    194
             (i) SEQUENCE CHARACTERISTICS:
     195
                  (A) LENGTH: 28 base pairs
    196
                  (B) TYPE: nucleic acid
                  (C) STRANDEDNESS: single
    197
    198
                  (D) TOPOLOGY: linear
     200
            (ii) MOLECULE TYPE: Genomic DNA
    201
           (iii) HYPOTHETICAL: NO
    202
           (iv) ANTI-SENSE: NO
W--> 203
            (v) FRAGMENT TYPE:
     204
            (vi) ORIGINAL SOURCE:
    205
            (ix) FEATURE:
    207
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
         GGGGAATTCA TTGGGATGTT TCAGTTGA
                                                                             28
    211 (2) INFORMATION FOR SEQ ID NO: 5:
    213
             (i) SEQUENCE CHARACTERISTICS:
    214
                  (A) LENGTH: 29 base pairs
    215
                  (B) TYPE: nucleic acid
    216
                  (C) STRANDEDNESS: single
    217
                  (D) TOPOLOGY: linear
W--> 219
           (ii) MOLECULE TYPE: DNA
    220
           (iii) HYPOTHETICAL: NO
    221
           (iv) ANTI-SENSE: NO
W--> 222
            (V) FRAGMENT TYPE:
    223
            (vi) ORIGINAL SOURCE:
    224.
            (ix) FEATURE:
    226
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
    228 CGAAAGTCCC CCCTAGGAGA TCTTAAGGA
                                                                             29
    230 (2) INFORMATION FOR SEQ ID NO: 6:
```

DATE: 03/27/2002

```
PATENT APPLICATION: US/09/836,911A
                                                              TIME: 14:35:31
                     Input Set : A:\402iseq.002
                     Output Set: N:\CRF3\03272002\1836911A.raw
              (i) SEQUENCE CHARACTERISTICS:
     232
     233
                   (A) LENGTH: 47 base pairs
                   (B) TYPE: nucleic acid
     234
     235
                   (C) STRANDEDNESS: single
     236
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: Gemonic DNA
W--> 238
            (iii) HYPOTHETICAL: NO
     239
     240
             (iv) ANTI-SENSE: NO
W--> 241
              (V) FRAGMENT TYPE:
             (vi) ORIGINAL SOURCE:
     242
     243
             (ix) FEATURE:
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
     247 CCGCTTAATA CTCTGATGAG TCCGTGAGGA CGAAACGCTC TCGCACC
                                                                                 47
     251 (2) INFORMATION FOR SEQ ID NO: 7:
     253
              (i) SEQUENCE CHARACTERISTICS:
                   (A) LENGTH: 25 base pairs
     254
     255
                   (B) TYPE: nucleic acid
     256
                   (C) STRANDEDNESS: single
     257
                   (D) TOPOLOGY: linear
     259
             (ii) MOLECULE TYPE: Genomic DNA
            (iii) HYPOTHETICAL: NO
     260
             (iv) ANTI-SENSE: NO
     261
W--> 262
             (V) FRAGMENT TYPE:
     263
             (vi) ORIGINAL SOURCE:
     264
             (ix) FEATURE:
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
     268 CGATTTAAAT TAATTAAGCC CGGGC
                                                                                 25
     271 (2) INFORMATION FOR SEQ ID NO: 8:
     273
              (i) SEQUENCE CHARACTERISTICS:
     274
                   (A) LENGTH: 27 base pairs
     275
                   (B) TYPE: nucleic acid
     276
                   (C) STRANDEDNESS: single
     277
                   (D) TOPOLOGY: linear
     279
             (ii) MOLECULE TYPE: Genomic DNA
     280
            (iii) HYPOTHETICAL: NO
     281
             (iv) ANTI-SENSE: NO
W--> 282
              (V) FRAGMENT TYPE:
     283
             (vi) ORIGINAL SOURCE:
             (ix) FEATURE:
     284
     286
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
                                                                                 27
     288 TAAATTTAAT TAATTCGGGC CCGTCGA
     290 (2) INFORMATION FOR SEQ ID NO: 9:
     292
              (i) SEQUENCE CHARACTERISTICS:
     293
                   (A) LENGTH: 69 base pairs
     294
                   (B) TYPE: nucleic acid
     295
                   (C) STRANDEDNESS: single
     296
                   (D) TOPOLOGY: linear
     298
             (ii) MOLECULE TYPE: Genomic DNA
     301
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
```

RAW SEQUENCE LISTING

## VERIFICATION SUMMARY PATENT APPLICATION: US/09/836,911A DATE: 03/27/2002 TIME: 14:35:32

Input Set : A:\402iseq.002

Output Set: N:\CRF3\03272002\I836911A.raw

```
L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:69 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=1
L:65 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=1
L:109 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=2
L:105 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=2
L:147 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=3
L:143 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=3
L:207 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=4
L:203 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=4
L:226 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=5
L:219 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=5
L:222 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=5
L:245 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=6
L:238 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=6
L:241 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=6
L:266 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=7
L:262 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=7
L:286 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=8
L:282 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=8
L:299 M:220 C: Keyword misspelled or invalid format, [(D) OTHER INFORMATION:]
L:299 M:220 C: Keyword misspelled or invalid format, Poss data loss, Seq 9, (D) OTHER
INFORMATION:
L:331 M:220 C: Keyword misspelled or invalid format, [(H) DOCUMENT NUMBER:]
L:430 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=11
L:426 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=11
L:449 M:246 W: Invalid value of Alpha Sequence Header Field, [FEATURE:], SeqNo=12
L:445 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=12
L:464 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=13
L:505 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=14 L:546 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=15
L:586 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=16
L:972 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=17
L:1706 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=18
L:1727 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=19
L:1757 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=20
L:1782 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=21
L:1806 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=22
L:1830 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=23
L:1859 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=24
L:1889 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=25
L:1907 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=26
L:1925 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=27
L:1943 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=28
L:1961 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=29
L:1980 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=30
L:1998 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=31
L:2016 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=32
L:2034 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=33
```

VERIFICATION SUMMARY

DATE: 03/27/2002

PATENT APPLICATION: US/09/836,911A

TIME: 14:35:32

Input Set : A:\402iseq.002
Output Set: N:\CRF3\03272002\I836911A.raw

L:2052 M:246 W: Invalid value of Alpha Sequence Header Field, [FRAGMENT TYPE:], SeqNo=34